SUMTER COUNTY BOARD OF COMMISSIONERS
EXECUTIVE SUMMARY

SUBJECT: Sumter County Stormwater Summary Report (for information)
REQUESTED ACTION: **For Board information**

☐ Work Session (Report Only) **DATE OF MEETING:** 5/24/2011
☒ Regular Meeting ☐ Special Meeting

CONTRACT: ☐ N/A Vendor/Entity: BCI
Effective Date: _____ Termination Date: _____
Managing Division / Dept: Public Works/Engineering

BUDGET IMPACT: _____
☐ Annual **FUNDING SOURCE:** _____
☐ Capital **EXPENDITURE ACCOUNT:** _____
☒ N/A

HISTORY/FACTS/ISSUES:
On March 8, 2011 the BOCC approved issuing a task order to BCI for $10,905 to conduct the first step in developing a county wide stormwater management program. The scope included:

1. Identify typical elements of a rural county stormwater management program (where do we need to be)
2. Identify and collate all current elements that could become a part of the stormwater management program (where are we)
3. Make recommendations for next steps and cost estimates for discrete steps (how do we get to where we need to be).

BCI has completed that study. While the County has some basic elements of a stormwater program (some GIS layers, some pond maintenance, involvement in the FEMA flood maps update, and the Gant Lake/Big Prairie watershed study), there are many other things the County should be doing now to prepare for pending regulatory requirements (NPDES, TMDL, and NNC) and better manage current stormwater issues.

The entire study is provided separately to the Commissioners due to its size. An executive summary of the report is attached to this agenda item. This report recommends the development of a more comprehensive stormwater management plan, and sustained funding to accommodate that plan.

Attached: Executive Summary to AMEC-BCI Report Project No. 600053

EXECUTIVE SUMMARY

Sumter County (County) requested AMEC-BCI Engineers & Scientists, Inc. (AMEC-BCI) to provide professional engineering services to meet the following objectives.

- Identify typical elements of a rural county stormwater management program.
- Identify and collate all current elements that would become the County's stormwater management program.
- Make recommendations for next steps, and cost estimates for discrete steps toward the County's stormwater management program.

In order to accomplish the above three tasks, AMEC-BCI interviewed stakeholders and regulatory agency staff, collected pertinent data related to the County's stormwater, evaluated the potential impact to the County from State and Federal regulations for stormwater, reviewed numerous existing studies related to the County's stormwater, and reviewed the County's land development code and comprehensive plan.

Drainage for the County is generally from the east toward the west. The Withlacoochee River and the Little Withlacoochee River define a large portion of the western and southern boundary of the County. Both rivers have been designated as Outstanding Florida Waters (OFW), therefore; the water quality of these water bodies is more stringently protected by state regulations than for other Class III water bodies. Lake Panasoffkee has been designated as an OFW as well as a Surface Water Improvement and Management (SWIM) priority water body. The SWIM designation qualifies the water body for funding and assistance from the Southwest Florida Water Management District (SWFWMD) toward restoring damaged ecosystems, preventing pollution from stormwater runoff and educating the public. Canals that were originally constructed from 1920 to 1930 for storage and limited drainage relief to flood prone areas exist mainly in the southern and central portion of the County. Jumper Creek west of US 301 has also been designated as an OFW.

The County is responsible for stormwater discharges from approximately 700 miles of roadway. The majority of the roadways consist of a paved rural section with roadside swales for drainage. County roadways within the villages are urban sections with curb and gutter. The County also maintains approximately 20 stormwater retention ponds that serve various roadways. The County is responsible for maintenance of the Gant Lake and Jumper Creek canal systems, and also for stormwater discharges for the 14 County Parks, all County office complexes, and maintenance areas.

Currently, stormwater related activities provided by County staff includes mowing the roadside swales and pond banks approximately once monthly during the growing season. The County also utilizes prison labor for this work. Drainage related complaints are recorded and addressed by the Public Works Department staff. The majority of the complaints are related to flooding rather than water quality.

The Federal Emergency Management Agency (FEMA) is currently partnering with SWFWMD to provide updated digital flood insurance rate maps for Sumter County. These new maps will be ready for review by the County in the summer of 2011.

There are four primary mechanisms through which the State of Florida regulates stormwater discharges:

- National Pollutant Discharge Elimination System (NPDES) Program
- Total Maximum Daily Load (TMDL) Program
- Numeric Nutrient Criteria (NNC)
- Environmental Resource Permitting (ERP) Program

Most likely within the next five years, the County's municipal separate stormwater system (roads, swales, ditches, pipes, inlets, etc.) will become regulated under the NPDES program. This program is administered by the Florida Department of Environmental Protection. Regulated systems are required to design a program to reduce the discharge of pollutants to the "maximum extent practicable", protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act. This usually requires the development of Best Management Practices (BMPs) and the achievement of measurable goals to satisfy the following six minimum control measures:

- Public education and Outreach
- Public Participation/Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff
- Post-Construction Runoff control
- Pollution Prevention/Good Housekeeping

Regular reporting to FDEP on the County's achievement of reducing stormwater discharge will be required under this program.

Seven water bodies within Sumter County are listed as "impaired", which means that the water quality of the water body does not meet the applicable standards. TMDLs are being developed for these water bodies by the Florida Department of Environmental Protection. A TMDL is the total amount of a particular pollutant that the water body can assimilate and maintain the applicable standard. When a TMDL is adopted for a water body to which Sumter County properties discharge, the County will be required to reduce pollutant loads from stormwater runoff to those water bodies.

Controversial federal numeric nutrient water quality standards for fresh water lakes, streams, and springs have been promulgated and will become a legal obligation in Florida on March 6, 2012. The likely impact of this new rule to Sumter County is an increase in the number of water bodies that will become "listed" as impaired and subject to TMDLs. Criteria for a stormwater management system to be permitted through the ERP program have become more stringent, particularly for systems that discharge to impaired waters. These systems are now required to provide a *net improvement* for the pollutants that contribute to the water body's impairment. To accomplish this, a higher level of treatment is required.

In order to preserve and protect the natural water resources in the County, comply with current stormwater regulations in Florida, and to prepare for the implementation of NNC in March 2012, the County needs to put into place an upgraded stormwater management program. The establishment of a stormwater management program typically will include the following elements:

- Legal Authority
- Administration
- Planning
- Capital Improvements
- Operation and Maintenance
- Regulation
- Monitoring and Evaluation
- Education Programs
- Technical Assistance
- Good Science
- Funding

AMEC-BCI recommends the County establish a program with a "prevention" philosophy rather than a "cure" philosophy, because it is easier, less expensive, and more effective to prevent stormwater problems than to cure them. The County's program can be managed within the Public Works Department rather than through a separate department established for stormwater.

The first step for the County toward this goal should be a study to summarize watershed characteristics, assess problems, and identify potential solutions. This study should include collection of data that can be used to update and expand the County's GIS library for stormwater infrastructure, canal alignments, stormwater complaints, etc. The cost to complete a study of this nature typically ranges from $100,000 to $350,000 depending on available information and the size of the study area. Several of the existing studies reviewed as a part of this project will be a launching point, and will reduce the effort required for the study.

Another step in establishing stormwater program includes updates to the land development code and the comprehensive plan to include Low Development Impact (LID) Standards. LID is a stormwater management approach that uses a suite of integrated hydrologic controls throughout the site to replicate the natural hydrologic functioning of the predevelopment landscape. LID includes BMPs such as preserving tree canopy, clustering homes, greenroofs, minimizing impervious areas, shared driveways, bioretention, stormwater reuse, selective clearing, etc.

Another important element of the County's stormwater program is regular maintenance of the Gant Lake and Jumper Creek canals, to minimize the overall effort required, and to provide drainage for low lying areas during times of high water. Clearing and disposing of debris as well as regular spraying to control vegetation in the canals will reduce the overall cost of maintenance for the canals.

A review of stormwater program budgets for several Florida County's as well as EPA data for stormwater programs nationwide shows that Sumter County should aim at budgeting approximately two million dollars annually for a stormwater management program. The funds can potentially be supplemented by various stormwater grants available from the SWFWMD and the FDEP for specific watershed-related activities or improvements.